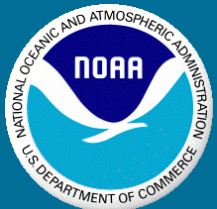


New York State Severe Weather Awareness Week May 3rd to May 9th, 2009

Severe Thunderstorms

Priscilla Nicosia
NOAA's National Weather Service
Binghamton NY



Severe Thunderstorms

A storm which produces hail $\frac{3}{4}$ inch diameter or larger and/or wind gusts 58 mph or stronger.



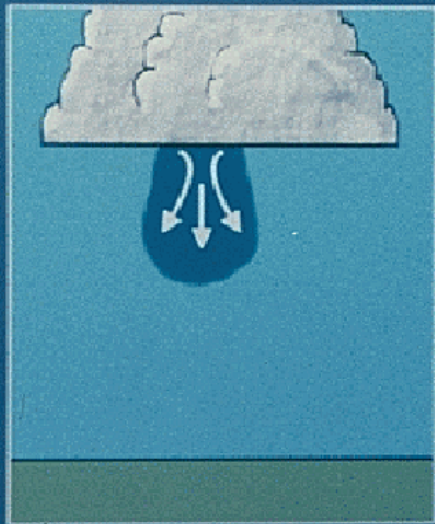
Severe Thunderstorms - Wind

- Severe Thunderstorm - Winds greater than 57 mph
- Thunderstorms with winds of 40 MPH create problems for recreational boaters.

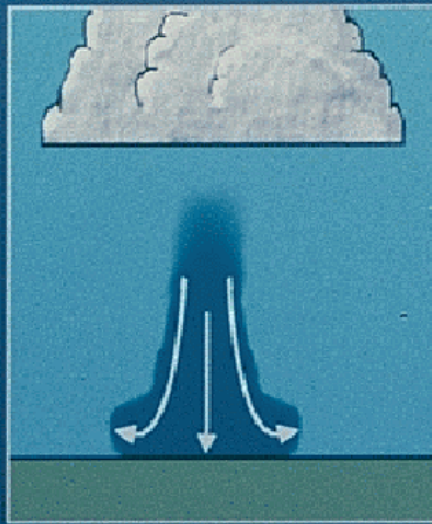


Downbursts

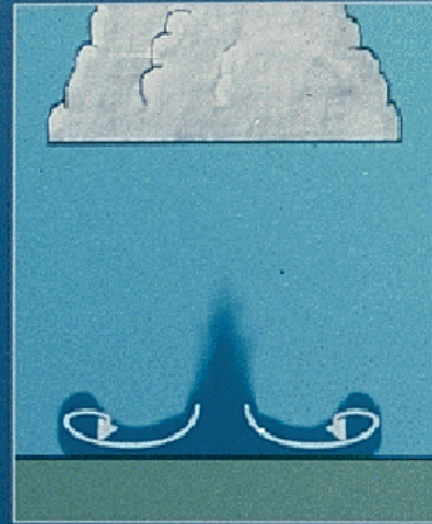
Downburst Life Cycle



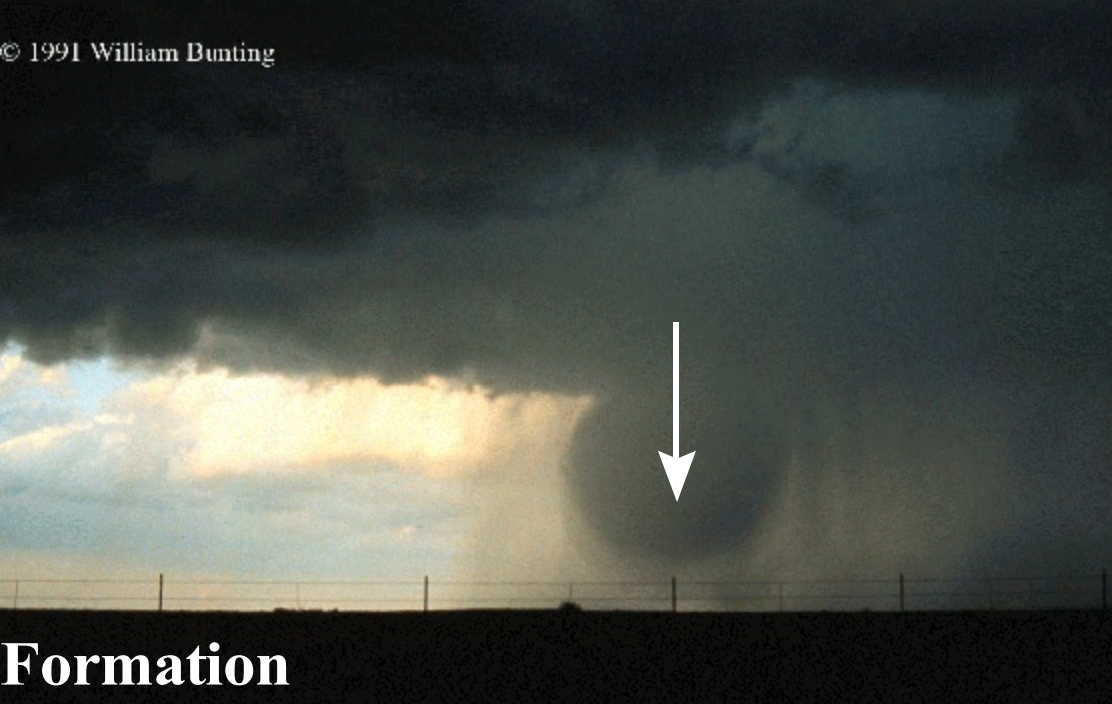
FORMATION -
Evaporation and
precip. drag
forms downdraft



IMPACT -
Downdraft quickly
accelerates and
strikes ground



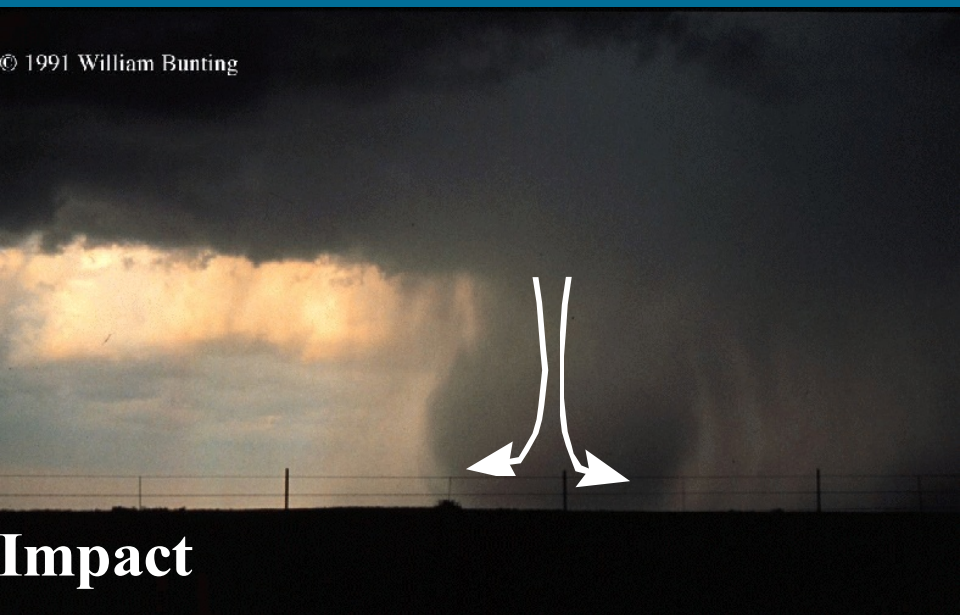
DISSIPATION -
Downburst moves
away from point
of impact



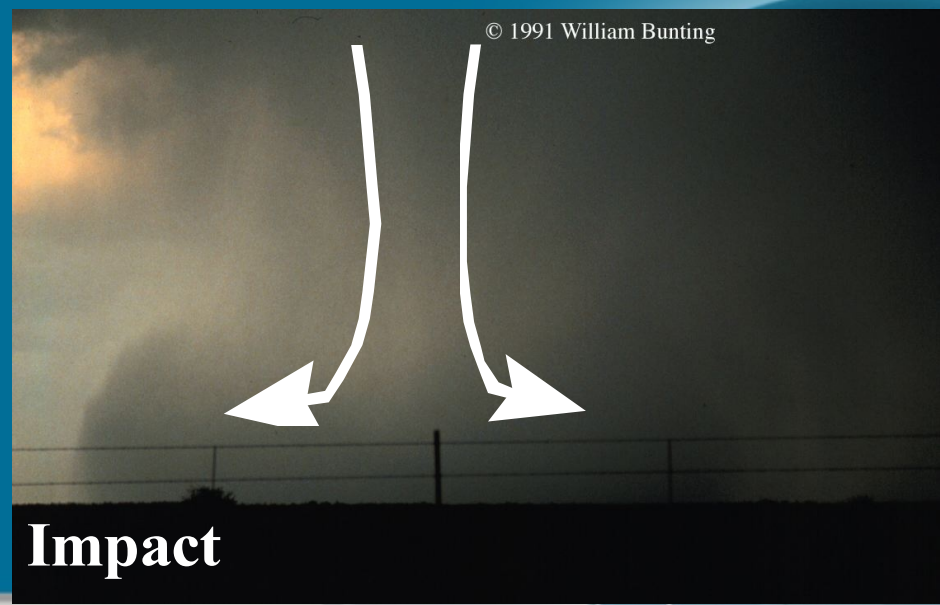
Formation

Microburst: A small, concentrated downburst affecting an area *less than 2.5 miles* across.

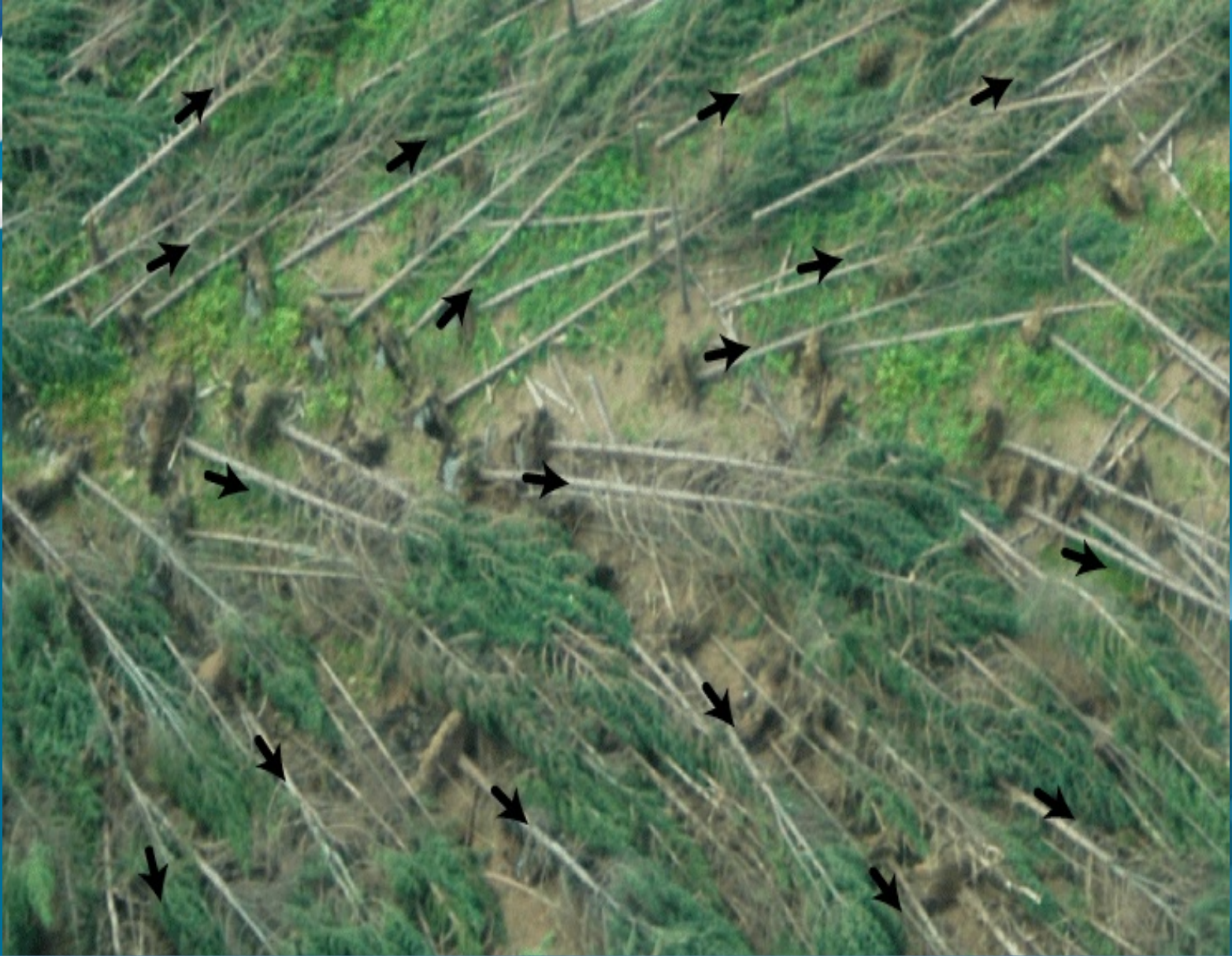
Macroburst: A large downburst with its outburst winds extending in *excess of 2.5 miles* across.



Impact



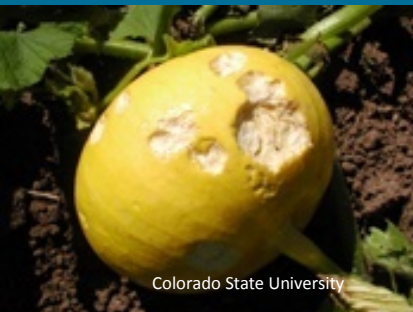
Impact



Downburst damage can sometimes look very similar to tornado damage!

Severe Thunderstorms - Hail

Hail can cause 1-2 billion dollars damage to crops and property each year.



Carmi, IL 8-5-08 By Jim Totten

New York Hail Storms

- Hail can fall as fast as 100 mph
- Most is pea size
- Very large hail is rare
- Strongest thunderstorms produce large hail and often have high winds and even tornadoes.



Hail in Niagara, NY

Hail Diameter Size	Description
$\frac{1}{4}''$	Pea size
$\frac{1}{2}''$	Mothball size
$\frac{3}{4}''$	Penny size
$\frac{7}{8}''$	Nickel size
1"	Quarter size
$1\frac{1}{4}''$	Half-dollar size
$1\frac{1}{2}''$	Walnut or Ping -Pong ball size
$1\frac{3}{4}''$	Golf-ball size
2"	Hen-egg size
$2\frac{1}{2}''$	Tennis-ball size
$2\frac{3}{4}''$	Baseball Size
4"	Grapefruit size
$4\frac{1}{2}''$	Softball size

WATCH vs. WARNING

CAUTION

Watch the Sky

Watch- “Stand-by”

Conditions are favorable for severe weather in or near the watch area. Watches are issued for tornadoes, severe thunderstorms and flash floods. Issued by the Storm Prediction Center

DANGER

Take Cover Now

Warning- “Activated”

The severe weather event is imminent or occurring in the warned area. Warnings are issued for tornadoes, severe thunderstorms, flash floods and river flooding. Issued by NWS Binghamton for central New York and northeast Pennsylvania.